

To: Kelly Campen

09/404269

PHP? /KNX 5D49 AU 3691

STIC  
Sep 1987



Scientific &amp; Technical Information Center

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## Database Search Request Confirmation

Thank you, KELLY CAMPEN. Your request (shown below) has been successfully sent to the STIC staff and a confirmation email was also sent to your own email address at [Kelly.Campen@uspto.gov](mailto:Kelly.Campen@uspto.gov).

Your name: **KELLY CAMPEN**

~~Email Address: KELLY.CAMPEN@USPTO.GOV~~

~~Employee number: 3691~~

Art Unit: **GROUP ART UNIT 3691**

~~Office Locations: 1400 33rd 49~~

~~Phone Number: (317) 272-2200~~

Mailbox Number:

Case serial number: **09/404269**

Class / Subclass(es): **705/003**

Earliest Priority Filing Date: **10/15/1999**

Format preferred for results: **E-mail**

Search Topic Information:

a method for submitting cardiovascular data analyzing a waveform of the cardiovascular signal to determine either the shape of the signal, a slope of the signal and an area under the signal and during the startup routine of the computer, a portion of the detected cardiovascular signal of the user is received and transmitting the data based on the received signal to a central database for storage in a record, associating limits with the data and then notifying the physician to contact the user when the limits are exceeded by the data. abstract: A method and system for providing online health monitoring and accumulating data from patients worldwide, wherein a database for storing a plurality of health statuses of a plurality of users is established, wherein the database is centrally-accessible from the Internet; data corresponding to a health statistic of a user is received from the user, the data being generated by a health monitoring device; the health statistic is analyzed to determine a health status from the health statistic; the health status is stored in the database; and a population statistic is updated based on the health status and the plurality of health statuses. Such monitoring is particularly useful for both diagnosing and prescribing preventive medical treatment, and is particularly suited for the field of cardiovascular health care. relevant claim: 25. (Previously Presented) A method, performed by a computer-controlled apparatus, for submitting acoustical cardiovascular data to a central database, the method comprising: receiving, from a user, a request to detect a cardiovascular signal of the user; initializing a cardiovascular monitoring device connected to a computer in response to the request; measuring an acoustical cardiovascular signal with the cardiovascular monitoring device while a startup routine performed by the computer is ongoing; analyzing a waveform of the cardiovascular signal to determine at least one of a shape of the signal, a slope of the signal, and an area under the signal; and receiving, at the computer after the startup routine, at least a portion of the detected cardiovascular signal of the user; transmitting data based on the received cardiovascular signal to a central database for storage in a record corresponding to the user; associating limits with the data based on the received cardiovascular signal; and notifying a user's physician, with a message sent from the computer, to contact the user when the limits are exceeded by the data.

Special Instructions and Other Comments:

~~I am sorry, I have already submitted this search in 2009 but the STIC staff has not yet responded to my request.~~

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Gale Group Trade & Industry DB

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11238543 Supplier Number: 55347601 (USE FORMAT 7 OR 9 FOR FULL TEXT )

**Hypertension Diagnostics Announces Agreement With MedWave Marketing.**

PR Newswire , 5655

August 4 , 1999

Language: English

Record Type: Fulltext

Word Count: 610 Line Count: 00056

...in the agreement."

Founded in 1988, Hypertension Diagnostics is focused on the development of proprietary **cardiovascular** profiling technology that analyzes arterial pulse pressure **waveform** data. HDI has developed two models of its HDI/PulseWave CardioVascular Profiling Instrument. HDI's

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w files

[File 15] **ABI/Inform(R)** 1971-2007/Apr 05

(c) 2007 ProQuest Info&Learning. All rights reserved.

[File 9] **Business & Industry(R)** Jul/1994-2007/Apr 04

(c) 2007 The Gale Group. All rights reserved.

[File 275] **Gale Group Computer DB(TM)** 1983-2007/Apr 03

(c) 2007 The Gale Group. All rights reserved.

[File 621] **Gale Group New Prod.Annou.(R)** 1985-2007/Apr 04

(c) 2007 The Gale Group. All rights reserved.

[File 636] **Gale Group Newsletter DB(TM)** 1987-2007/Apr 04

(c) 2007 The Gale Group. All rights reserved.

[File 16] **Gale Group PROMT(R)** 1990-2007/Apr 04

(c) 2007 The Gale Group. All rights reserved.

[File 160] **Gale Group PROMT(R)** 1972-1989

(c) 1999 The Gale Group. All rights reserved.

[File 148] **Gale Group Trade & Industry DB** 1976-2007/Mar 27

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; d s

Set	Items	Description
S1	2011248	ACOUSTICAL OR AUDIO OR SOUND FROM 15, 9, 275, 621, 636, 16, 160, 148
S2	1415766	SHAPE OR CHARACTERISTICS OR SLOPE OR PATTERN FROM 15, 9, 275, 621, 636, 16, 160, 148
S3	33381	WAVEFORM? FROM 15, 9, 275, 621, 636, 16, 160, 148
S4	215439	HEARTBEAT? OR HEART()BEAT? OR CARDIOVASCULAR? FROM 15, 9, 275, 621, 636, 16, 160, 148
S5	1331	CARDIO()GRAPH? OR CARDIOGRAPH? FROM 15, 9, 275, 621, 636, 16, 160, 148
S6	2091273	DATABANK? ? OR DATABASE? ? OR DATA() (BANK? ? OR BASE? ?) FROM 15, 9, 275, 621, 636, 16, 160, 148
S7	1280995	PATIENT? ? FROM 15, 9, 275, 621, 636, 16, 160, 148
S8	2343539	MONITOR? OR SENSOR? FROM 15, 9, 275, 621, 636, 16, 160, 148
S9	2171083	SUBMIT? OR TRANSMIT? OR INPUT? FROM 15, 9, 275, 621, 636, 16, 160, 148
S10	1832	(NOTIFY? OR NOTIFICATION? OR MESSAGE? OR EMAIL) (3N) (DOCTOR OR PHYSICIAN) FROM 15, 9, 275, 621, 636, 16, 160, 148
S11	2529	S WAVE() FORM?
S12	81	S (S3 OR S11) (7N) S4
S13	7	S S12(2S) S6
S14	3	S S13 NOT PD=>19991015
S15	8304802	S PC OR LAPTOP? OR LAP()TOP? ? OR COMPUTER? ? OR PDA OR DIGITAL()ASSISTANT
S16	3139262	S DEVICE?
S17	7	S (S3 OR S11) (10N) S4 (10N) (S6 OR S15)
S18	7	S S17 NOT S13
S19	4	S S18 NOT PD=>19991015

?

? t 14/3,k/all

14/3,K/1 (Item 1 from file: 621) Links

Gale Group New Prod.Annou.(R)

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02138509 Supplier Number: 55347601 (USE FORMAT 7 FOR FULLTEXT)

**Hypertension Diagnostics Announces Agreement With MedWave Marketing.**

PR Newswire , p 5655

August 4 , 1999

**Language:** English **Record Type:** Fulltext

**Document Type:** Newswire ; Trade

**Word Count:** 569

...will be the primary focus of this consulting agreement. We look forward to developing the **data-based** evidence these strategic customers will need to position our unique technology package as a new...

...in the agreement."

Founded in 1988, Hypertension Diagnostics is focused on the development of proprietary **cardiovascular** profiling technology that analyzes arterial pulse pressure **waveform** data. HDI has developed two models of its HDI/PulseWave CardioVascular Profiling Instrument. HDI's

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14/3,K/2 (Item 1 from file: 16) Links

Gale Group PROMT(R)

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06537160 Supplier Number: 55347601 (USE FORMAT 7 FOR FULLTEXT)

**Hypertension Diagnostics Announces Agreement With MedWave Marketing.**

PR Newswire , p 5655

August 4 , 1999

**Language:** English **Record Type:** Fulltext

**Document Type:** Newswire ; Trade

**Word Count:** 569

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analyzes arterial pulse pressure waveform data. HDI has developed two models of its HDI/PulseWave CardioVascular Profiling Instrument. HDI's  
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14/3,K/3 (Item 1 from file: 148) [Links](#)

Gale Group Trade & Industry DB

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11238543 Supplier Number: 55347601 (USE FORMAT 7 OR 9 FOR FULL TEXT )

Hypertension Diagnostics Announces Agreement With MedWave Marketing.

PR Newswire , 5655

August 4 , 1999

Language: English

Record Type: Fulltext

Word Count: 610 Line Count: 00056

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Founded in 1988, Hypertension Diagnostics is focused on the development of proprietary cardiovascular profiling technology that analyzes arterial pulse pressure waveform data. HDI has developed two models of its HDI/PulseWave CardioVascular Profiling Instrument. HDI's  
...

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4 S S18 NOT PD=>19991015

? t 19/3,k/all

19/3,K/1 (Item 1 from file: 9) [Links](#)

Business & Industry(R)

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01737798 Supplier Number: 24128482 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Patient Monitoring Systems - Cardiovascular Screening Opportunity

( For patient monitoring systems, cardiovascular screening provides an opportunity, as blood vessel diseases are the leading cause of death )

Medical & Healthcare Marketplace Guide , v 1 , p I-617+

1998

Document Type: Journal; Industry Overview ( United States )

Language: English Record Type: Fulltext

Word Count: 1280 (USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:

...proprietary instrument and procedures that painlessly and non-invasively collect thirty seconds of blood pressure **waveform** data, automatically analyze the data by means of an embedded **computer**, and generate a **CardioVascular Profile Report**. The system provides fourteen **cardiovascular** values, including artery elasticity indices. Clinical research suggests that the arterial elasticity indices can be...

...blood pressure and pulse rate that it then uses to indicate one of five general **cardiovascular** conditions.

- Pulse Metric uses proprietary non-invasive **waveform** technology with a variety of personal **computer** based products, but the equipment itself does not appear to determine arterial elasticity values.
- PWV...

19/3,K/2 (Item 1 from file: 621) [Links](#)

Gale Group New Prod.Annou.(R)

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01118671 Supplier Number: 40903609 (USE FORMAT 7 FOR FULLTEXT)

#### **OUTPUT WAVEFORMS ACQUIRED FROM REAL-LIFE TRANSIENTS**

News Release , p 1

August 16 , 1989

**Language:** English **Record Type:** Fulltext

**Document Type:** Magazine/Journal ; Trade

**Word Count:** 160

...square, triangle, ramp, pulse, or white noise waveforms.

Output any arbitrary waveform using the integrated **PC compatible**

controller. A built in **waveform**

library includes: noise sinewave,

decaying sinewave, full rectified sinewave, AM swept, half AM modulation, and vibration **waveforms**

Simulate: brainwave, pacemaker,

**heartbeat**

, nerve response, switcher motor, solenoid, relay contact, disk drive, and material testing **waveforms**.

#### Product Highlights:

- \* 12 bit analog to digital converter resolution
- \* Integrated **PC compatible controller**
- \* Output modes: continuous, sweep, burst
- \* Trigger modes: internal, external, gated
- \* 16,000 point...

19/3,K/3 (Item 1 from file: 636) [Links](#)

Gale Group Newsletter DB(TM)

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01151911 Supplier Number: 40960819 (USE FORMAT 7 FOR FULLTEXT)

### **Cardiac Patient Robot for Auscultation Training**

Japan Report Medical Technology , n 5 , p N/A

Oct , 1989

**Language:** English **Record Type:** Fulltext

**Document Type:** Magazine/Journal ; Trade

**Word Count:** 466

...a function that shows the entire body's blood pressure changes in linkage with the **heartbeat**.

Using a **computer** (other than the one connected to the mannequin), enables the blood pressure and bloodflow **waveform** of 14 parts (from the brain, to the skin of the feet and fingers) to...

19/3,K/4 (Item 1 from file: 160) [Links](#)

Gale Group PROMT(R)

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02318571

### **OUTPUT WAVEFORMS ACQUIRED FROM REAL-LIFE TRANSIENTS**

News Release August 16, 1989 p. 1

...square, triangle, ramp, pulse, or white noise waveforms. Output any arbitrary waveform using the integrated PC compatible controller. A built in **waveform** library includes: noise sinewave, decaying sinewave, full rectified sinewave, AM swept, half AM modulation, and vibration **waveforms**. Simulate: brainwave, pacemaker, **heartbeat**, nerve response, switcher motor, solenoid, relay contact, disk drive, and material testing **waveforms**.

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? t 14/3,k/all

14/3,K/1 (Item 1 from file: 621) [Links](#)

Gale Group New Prod.Annou.(R)

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02138509 Supplier Number: 55347601 (USE FORMAT 7 FOR FULLTEXT)

**Hypertension Diagnostics Announces Agreement With MedWave Marketing.**

PR Newswire , p 5655

August 4 , 1999

**Language:** English **Record Type:** Fulltext

**Document Type:** Newswire ; Trade

**Word Count:** 569

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14/3,K/2 (Item 1 from file: 16) [Links](#)

Gale Group PROMT(R)

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06537160 Supplier Number: 55347601 (USE FORMAT 7 FOR FULLTEXT)

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PR Newswire , p 5655

August 4 , 1999

**Language:** English **Record Type:** Fulltext

**Document Type:** Newswire ; Trade

**Word Count:** 569

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14/3,K/3 (Item 1 from file: 148) [Links](#)

? show files

[File 610] **Business Wire** 1999-2007/Apr 05

(c) 2007 Business Wire. All rights reserved.

\*File 610: File 610 now contains data from 3/99 forward. Archive data (1986-2/99) is available in File 810.

[File 810] **Business Wire** 1986-1999/Feb 28

(c) 1999 Business Wire . All rights reserved.

[File 476] **Financial Times Fulltext** 1982-2007/Apr 05

(c) 2007 Financial Times Ltd. All rights reserved.

[File 624] **McGraw-Hill Publications** 1985-2007/Apr 04

(c) 2007 McGraw-Hill Co. Inc. All rights reserved.

\*File 624: Homeland Security & Defense and 9 Platt energy journals added Please see HELP NEWS624 for more

[File 634] **San Jose Mercury** Jun 1985-2007/Apr 04

(c) 2007 San Jose Mercury News. All rights reserved.

[File 20] **Dialog Global Reporter** 1997-2007/Apr 05

(c) 2007 Dialog. All rights reserved.

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Set        Items        Description  
S1        1778082      ACOUSTICAL OR AUDIO OR SOUND FROM 610, 810, 476, 624, 634, 20  
S2        1107972      SHAPE OR CHARACTERISTICS OR SLOPE OR PATTERN FROM 610, 810, 476, 624, 634,  
20  
S3        5610          WAVEFORM? FROM 610, 810, 476, 624, 634, 20  
S4        137892      HEARTBEAT? OR HEART()BEAT? OR CARDIOVASCULAR? FROM 610, 810, 476, 624,  
634, 20  
S5        923          CARDIO()GRAPH? OR CARDIOGRAPH? FROM 610, 810, 476, 624, 634, 20  
S6        794062      DATABANK? ? OR DATABASE? ? OR DATA()BANK? ? OR BASE? ?) FROM 610, 810,  
476, 624, 634, 20  
S7        1113546     PATIENT? ? FROM 610, 810, 476, 624, 634, 20  
S8        2663470     MONITOR? OR SENSOR? FROM 610, 810, 476, 624, 634, 20  
S9        1747488     SUBMIT? OR TRANSMIT? OR INPUT? FROM 610, 810, 476, 624, 634, 20  
S10      1094        (NOTIFY? OR NOTIFICATION? OR MESSAGE? OR EMAIL) (3N) (DOCTOR OR PHYSICIAN)  
FROM 610, 810, 476, 624, 634, 20  
S11      67          S S3(6N) (S4 OR HEART)  
S12      4108435     S PC OR COMPUTER? OR LAPTOP? OR LAP()TOP? ? OR PDA OR BLACKBERRY OR  
DIGITAL()ASSISTANT?  
S13      0          S S11(10N) S6(5N) S12  
S14      3          S S11(10N) (S6 OR S12)  
S15      64        S S11 NOT S14  
S16      43        S S15/1999:2007  
S17      21        S S15 NOT S16

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? t 13/7

14/3,k/all

14/3,K/1 (Item 1 from file: 810) [Links](#)

Business Wire

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0167646 BW033

### **WESTMARK INTL : ATL and SpaceLabs introduce new products at ACC meeting**

March 19, 1990

**Byline:** Business Editors/Medical Technology Writers

...three new products:

MultiView Arrhythmia monitoring, the PCMS Digital Telemetry System for "cordless" monitoring of **heart waveforms** in hospital intermediate care units, and the PC Express monitor, the industry's first truly modular portable monitor. All product introductions are fully...

14/3,K/2 (Item 2 from file: 810) [Links](#)

Business Wire

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0167644 BW032

### **WESTMARK INTL : ATL and SpaceLabs introduce new products at ACC meeting**

March 19, 1990

**Byline:** Business Editors/Medical Technology Writers

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MultiView Arrhythmia monitoring, the PCMS Digital Telemetry System for "cordless" monitoring of **heart waveforms** in hospital intermediate care units, and the PC Express monitor, the industry's first truly modular portable monitor. All product introductions are fully...

14/3,K/3 (Item 1 from file: 20) [Links](#)

Dialog Global Reporter

(c) 2007 Dialog. All rights reserved.

**13340042 (USE FORMAT 7 OR 9 FOR FULLTEXT)**

**Study in Surgical Use Confirms the Vasotrac(R) NIBP Monitor's Performance With Difficult Patients**

PR NEWSWIRE

October 17, 2000

**Journal Code: WPRW Language: English Record Type: FULLTEXT**  
**Word Count: 530**  
**(USE FORMAT 7 OR 9 FOR FULLTEXT)**

...pulse oxymetry and urine output were continuously monitored. Direct BP and simultaneously measured Vasotrac BP, waveform and heart rate were recorded continuously on a PC computer just before and during DH. BP measured directly (via radial artery catheter) was analyzed for...

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21 S S15 NOT S16

? t 17/3,k/all

17/3,K/1 (Item 1 from file: 810) [Links](#)  
Business Wire  
(c) 1999 Business Wire . All rights reserved.  
0847438 BW0135

#### **Business Wire Recap**

May 06, 1998

**Byline:** EDITORS

...BW1159 09:31)  
(MARQUETTE-MEDICAL) (MARQ) MILWAUKEE--Marquette CV-WEB Enables Intranet Access to MUSE **Cardiovascular** Data and ECG **Waveforms**  
(BW0109  
09:31)  
(PARKER-HANNIFIN) (PH) CLEVELAND--Parker Acquires Assets of Dynamic Valves, Inc. (BW1162...)

17/3,K/2 (Item 2 from file: 810) [Links](#)  
Business Wire  
(c) 1999 Business Wire . All rights reserved.  
0847379 BW0109

**MARQUETTE MEDICAL : Marquette CV-WEB Enables Intranet Access to MUSE Cardiovascular Data and ECG Waveforms**

May 06, 1998

**Byline:** Business Editors, Hi-Tech Writers

## **Marquette CV-WEB Enables Intranet Access to MUSE Cardiovascular Data and ECG Waveforms**

17/3,K/3 (Item 3 from file: 810) [Links](#)

Business Wire

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084331 BW0028

## **HEWLETT PACKARD : AHA Scientific Statement Concludes HP' Low-Energy Biphasic Waveform Technology is Safe, Acceptable and Clinically Effective**

April 29, 1998

**Byline:** Business Editors and Health/Medical Writers

...is the only AED cleared for use by the FDA that incorporates low-energy biphasic waveform.

The AHA's Committee on Emergency Cardiovascular Care (ECC) and its subcommittees published their conclusions on the low-energy biphasic waveform in...

17/3,K/4 (Item 4 from file: 810) [Links](#)

Business Wire

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0827130 BW0175

## **MARQUETTE MEDICAL : Marquette Medical Announces Initiative To Integrate Echo Data From All Major Ultrasound Vendors Into the Marquette Cardiovascular Information System**

March 26, 1998

**Byline:** Business Editors, Medical Writers

...to echo data, the MUSE is the repository of choice for managing, processing and distributing cardiovascular data and waveforms from 15 different procedures such as cardiac cath, EP, exercise, Holter, ECG, nuclear, and defibrillator...

17/3,K/5 (Item 5 from file: 810) [Links](#)

Business Wire

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0826533 BW0158

**MARQUETTE MEDICAL : Marquette Medical Systems Receives Certification for Software Link To ACC National Cardiovascular Data Registry**

March 25, 1998

**Byline:** Business Editors, Technology and Health Writers

...r) and the Midas System(r) provide. "Because MUSE provides access to textual data and **waveforms** from 16 different **cardiovascular** procedures including cardiac catheterization, stress tests, Holter, defibrillator, ECG, and nuclear cardiology studies, MUSE users..."

17/3,K/6 (Item 6 from file: 810) [Links](#)

Business Wire

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0800350 BW1223

**MARQUETTE MEDICAL : Marquette Announces Information Interchange - i2 - Program for World's Most Popular Cardiovascular Information System**

January 27, 1998

**Byline:** Business Editors, Medical/Technology Writers

...Marquette to interface their products."

The MUSE CV Information System provides access to data and **waveforms** from 16 different **cardiovascular** procedures including cardiac catheterization, stress tests, holter, defibrillator, ECG, echocardiography and nuclear cardiology studies. The...

17/3,K/7 (Item 7 from file: 810) [Links](#)

Business Wire

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0694690 BW1027

**HEARTSTREAM : New studies show superiority of biphasic waveform in treating sudden cardiac arrest**

April 23, 1997

**Byline:** Health/Medical Writers and Business Editors

...current than monophasic shocks.

The authors also determined that animals treated with low energy

biphasic waveforms had evidence of significantly less heart dysfunction following treatment than those treated with monophasic shocks. However, the authors also noted that...

17/3,K/8 (Item 8 from file: 810) [Links](#)

Business Wire

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0675647 BW1397

#### **MARQUETTE MEDICAL SYST : Marquette, Physio-Control forge alliance**

February 25, 1997

...heart monitor/defibrillator with 12-lead capability to capture an electrocardiogram (ECG) from a suspected heart attack victim and immediately transmit the waveforms to the Marquette MUSE CV(TM) cardiovascular information system installed at the hospital -- before the patient is even placed in an ambulance...

17/3,K/9 (Item 9 from file: 810) [Links](#)

Business Wire

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0489893 BW1092

#### **ANALOGIC : Analogic announces FDA acceptance of 510(k) application for FETALGARD 3000 family of fetal monitors**

May 26, 1995

**Byline:** Business Editors

...monitors in one, the IP2 is both a non-invasive physiologic maternal monitor providing maternal heart rate (MHR) and respiration waveform displays, and a fully functional fetal monitor capable of monitoring triplets. The IP2 also offers...

17/3,K/10 (Item 10 from file: 810) [Links](#)

Business Wire

(c) 1999 Business Wire . All rights reserved.

0382128 BW196

#### **PROTOCOL SYSTEMS 2 : Protocol Systems Inc. Introduces Telemetry-Based Patient Monitoring System**

January 27, 1994

**Byline:** Business Editors

...display. The Propaq monitor processes and displays the data in real-time, which comprises ECG waveform and numeric heart rate, battery voltage, lead-off, pacemaker detection and transmitter identification. The Protocol Cordless system also...

17/3,K/11 (Item 11 from file: 810) [Links](#)

Business Wire

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0358931 BW751

**BIOSYSS : Biosyss seeks F.D.A.'s approval to market world's first continuous, non-invasive blood-pressure-monitoring device based on arterial-pulse waveform analysis technology**

September 29, 1993

**Byline:** Business Editors

...s products are based on the company's revolutionary and patent-pending technological approach to cardiovascular monitoring and diagnostics -- called arterial-pulse waveform analysis.

Biosyss uses piezoelectric sensors, such as those used in sophisticated geo-seismic equipment, for...

17/3,K/12 (Item 12 from file: 810) [Links](#)

Business Wire

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0337639 BW772

**BIOSYSS NEBH : NEBH begins clinical study of world's first continuous, non-invasive blood pressure monitoring device**

June 2, 1993

**Byline:** Business Editors

...invasive monitoring system.

The device is based on the Biosyss's novel technological approach

to cardiovascular diagnostics, called arterial-pulse waveform analysis.

The Biosyss system not only continuously and non-invasively provides a real-time display...

17/3,K/13 (Item 13 from file: 810) [Links](#)

Business Wire

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0326663 BW710

### **BIOSYSS : Biosyss names Jeffrey T. Barnes as its new president**

March 30, 1993

**Byline:** Business Editors

...now in development, products which are based on the company's revolutionary technological approach to cardiovascular diagnostics -- called "arterial-pulse waveform analysis."

Biosyss uses "piezoelectric" sensors, such as those used in sophisticated geoseismic equipment, for converting...

17/3,K/14 (Item 14 from file: 810) [Links](#)

Business Wire

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0317421 BW666

### **BIOSYSS : Biosyss begins clinical evaluation of its continuous, non-invasive blood-pressure-monitoring device**

February 2, 1993

**Byline:** Business Editors

...this year.

Biosyss's products are based on the company's revolutionary technological approach to cardiovascular diagnostics -- called "arterial-pulse waveform analysis."

Biosyss uses "piezoelectric" sensors, such as those used in sophisticated geoseismic equipment, for converting...

17/3,K/15 (Item 15 from file: 810) [Links](#)

Business Wire

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0315524 BW651

**BIOSYSS : Biosyss signs product-development agreement**

January 22, 1993

**Byline:** Business Editors

...a patient.

Biosyss's products are based on the company's revolutionary technological approach to **cardiovascular** diagnostics -- called "arterial-pulse waveform analysis."

Biosyss uses "piezoelectric" sensors, such as those used in sophisticated geoseismic equipment, for converting...

17/3,K/16 (Item 16 from file: 810) [Links](#)

Business Wire

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0038990 BW717

**GENERAL SCANNING : General Scanning sells China province \$2 million of medical equipment and manufacturing technology**

February 13, 1987

**Byline:** Business Editors

...Guangdong Province, with its open loop galvanometer; a small electro mechanical device that is the **heart** of hundreds of different analog **waveform** recording applications in the medical, general industrial, petrochemical and geophysical markets..

Designed for use in...

17/3,K/17 (Item 1 from file: 476) [Links](#)

Financial Times Fulltext

(c) 2007 Financial Times Ltd. All rights reserved.  
0003019696 B05DIA7AACFT

**Technology (Health): Portable Heart Starters**

Financial Times , Section L ED , P 14

Tuesday , March 19, 1985

**DOCUMENT TYPE: NEWSPAPER LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT**

Word Count: 312

...the condition.

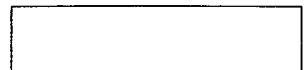
The 4,200 pounds sterling machines also has a display which shows the **waveform** of the **heart beat**, so that the operator can monitor the effect of the stimuli.

The hardware is suitable...

17/3,K/18 (Item 1 from file: 624) [Links](#)

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0368401

Maximizing Your PC for Graphics

Rick Farris

Unix World, Vol. IX, No. 2, Pg 61

February, 1992

JOURNAL CODE: UNIX

SECTION HEADING: What's New: Point of Purchase ISSN: 0739-5922

WORD COUNT: 1,550

TEXT:

... intensive care units (ICUs) and displays it under X Windows. "We have ICU monitors with heart **waveforms** and pressure **waveforms**," he explains, "and then we have information systems that are UNIX boxes that sit on..."

17/3,K/19 (Item 1 from file: 20) [Links](#)

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**01556416 (USE FORMAT 7 OR 9 FOR FULLTEXT)**

**Marquette CV-WEB Enables Intranet Access to MUSE Cardiovascular Data and ECG Waveforms**

BUSINESS WIRE

May 06, 1998 9:46

**Journal Code: WBWE Language: English Record Type: FULLTEXT**

**Word Count:** 410

**Marquette CV-WEB Enables Intranet Access to MUSE Cardiovascular Data and ECG Waveforms**

17/3,K/20 (Item 2 from file: 20) [Links](#)

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01245534 (USE FORMAT 7 OR 9 FOR FULLTEXT)

**Marquette Medical Announces Initiative To Integrate Echo Data From All Major Ultrasound Vendors Into the Marquette Cardiovascular Information System**

**BUSINESS WIRE**

March 26, 1998 14:38

**Journal Code:** WBWE **Language:** English **Record Type:** FULLTEXT

**Word Count:** 392

...to echo data, the MUSE is the repository of choice for managing, processing and distributing **cardiovascular** data and **waveforms** from 15 different procedures such as cardiac cath, EP, exercise, Holter, ECG, nuclear, and defibrillator...

17/3,K/21 (Item 3 from file: 20) [Links](#)

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01236338 (USE FORMAT 7 OR 9 FOR FULLTEXT)

**Marquette Medical Systems Receives Certification for Software Link To ACC National Cardiovascular Data Registry**

**BUSINESS WIRE**

March 25, 1998 12:53

**Journal Code:** WBWE **Language:** English **Record Type:** FULLTEXT

**Word Count:** 376

...r) and the Midas System(r) provide. "Because MUSE provides access to textual data and **waveforms** from 16 different **cardiovascular** procedures including cardiac catheterization, stress tests, Holter, defibrillator, ECG, and nuclear cardiology studies, MUSE users..."

?

? show files

[File 72] EMBASE 1993-2007/Apr 05

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[File 73] EMBASE 1974-2007/Apr 05

(c) 2007 Elsevier B.V. All rights reserved.

[File 149] TGG Health&Wellness DB(SM) 1976-2007/Mar W3

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; d s  
Set       Items      Description  
S1       100715     ACOUSTICAL OR AUDIO OR SOUND FROM 72, 73, 149  
S2       1238404     SHAPE OR CHARACTERISTICS OR SLOPE OR PATTERN FROM 72, 73, 149  
S3       30102      WAVEFORM? FROM 72, 73, 149  
S4       1666451     HEARTBEAT? OR HEART()BEAT? OR CARDIOVASCULAR? FROM 72, 73, 149  
S5       3511        CARDIO()GRAPH? OR CARDIOGRAPH? FROM 72, 73, 149  
S6       191507      DATABANK? ? OR DATABASE? ? OR DATA() (BANK? ? OR BASE? ?) FROM 72, 73, 149  
S7       4920224     PATIENT? ? FROM 72, 73, 149  
S8       920992      MONITOR? OR SENSOR? FROM 72, 73, 149  
S9       346900      SUBMIT? OR TRANSMIT? OR INPUT? FROM 72, 73, 149  
S10      892         (NOTIFY? OR NOTIFICATION? OR MESSAGE? OR EMAIL) (3N) (DOCTOR OR PHYSICIAN)  
FROM 72, 73, 149  
S11      1686        S3(6N) (S4 OR HEART) FROM 72, 73, 149  
S12      1444970     PC OR COMPUTER? OR LAPTOP? OR LAP()TOP? ? OR PDA OR BLACKBERRY OR  
DIGITAL()ASSISTANT? FROM 72, 73, 149  
S13      0            S11(10N)S6(5N)S12 FROM 72, 73, 149  
S14      106          S11(10N) (S6 OR S12) FROM 72, 73, 149  
S15      1580        S11 NOT S14 FROM 72, 73, 149  
S16      1171        S15/1999:2007 FROM 72, 73, 149  
S17      409          S15 NOT S16 FROM 72, 73, 149  
S18      0            S S14(10N)S10  
S19      0            S S14(10N)S2  
S20      79           S S14/1999:2007  
S21      409          S S17 NOT S20  
S22      79           S S14/1999:2007  
S23      27           S S14 NOT S22

S20            13     S S14 NOT S18  
S21            13     RD    (unique items)

? t 23/3,k/all

23/3,K/1 (Item 1 from file: 72) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

EMBASE

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07400091    EMBASE No: 1998311521

**Testing neonate-infant membrane oxygenators with the University of Texas neonatal pulsatile cardiopulmonary bypass system in vitro**

Undar A.; Holland M.C.; Howelton R.V.; Benson C.K.; Ybarra J.R.; LaWayne Miller O.; Rossbach M.M.; Runge T.M.; Johnson S.B.; Sako E.Y.; Calhoon J.H.

A. Undar, Cardiothoracic Research Laboratory, Department of Surgery, Univ Texas Hlth Sci Ctr San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7841 United States

**Author Email:** undar@uthscsa.edu

Perfusion ( PERFUSION ) ( United Kingdom ) 1998 , 13/5 (346-352)

**CODEN:** PERFE   **ISSN:** 0267-6591

**Document Type:** Journal ; Article

**Language:** ENGLISH   **Summary Language:** ENGLISH

**Number Of References:** 41

**MEDICAL DESCRIPTORS:**

neurological complication--prevention--pc; heart ventricle ejection time; waveform; human; article; priority journal

23/3,K/2 (Item 2 from file: 72) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

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07267163    EMBASE No: 1998150260

**Model-based estimation of cardiovascular repolarization features: Ischaemia detection and PTCA monitoring**

Laguna P.; Garcia J.; Roncal I.; Wagner G.; Lander P.; Mark R.

P. Laguna, Depto. Ingenieria Electron. y Comun., Centro Politecnico Superior, Universidad de Zaragoza, Zaragoza Spain

Journal of Medical Engineering and Technology ( J. MED. ENG. TECHNOL. ) ( United Kingdom ) 1998 , 22/2 (64-72)

**CODEN:** JMTEDE   **ISSN:** 0309-1902

**Document Type:** Journal ; Article

**Language:** ENGLISH   **Summary Language:** ENGLISH

**Number Of References:** 13

**MEDICAL DESCRIPTORS:**

st segment; t wave; waveform; clinical protocol; data base; heart rate; oscillation; signal noise ratio; analytic

method; human; article

23/3,K/3 (Item 3 from file: 72) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

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06856490 EMBASE No: 1997139125

**Cardiotocogram compared to Doppler investigation of the fetal circulation in the premature growth-retarded fetus: Longitudinal observations**

Hecher K.; Hackeloer B.-J.

Dr. K. Hecher, Dept. Prenatal Diagnosis and Therapy, AK Barmbek, Rubenkamp 148, 22291 Hamburg Germany  
Ultrasound in Obstetrics and Gynecology ( ULTRASOUND OBSTET. GYNECOL. ) ( United Kingdom ) 1997,  
9/3 (152-161)

**CODEN:** UOGYF **ISSN:** 0960-7692

**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**Number Of References:** 26

It was our objective to compare **computerized fetal heart rate analysis** with blood flow velocity **waveform analysis** of the arterial and venous fetal circulation in intrauterine growth retardation. We report five...

23/3,K/4 (Item 4 from file: 72) [Links](#)

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06202304 EMBASE No: 1995239589

**How useful is intrapartum electronic fetal heart rate monitoring?**

Groves P.A.; Oriol N.E.

Dept of Anesthesia and Critical Care, Beth Israel Hospital, Harvard Medical School, 330 Brookline Avenue, Boston, MA 02 215 United States

International Journal of Obstetric Anesthesia ( INT. J. OBSTET. ANESTH. ) ( United Kingdom ) 1995 , 4/3 (161-167)

**CODEN:** IOANE **ISSN:** 0959-289X

**Document Type:** Journal ; Review

**Language:** ENGLISH **Summary Language:** ENGLISH

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23/3,K/5 (Item 5 from file: 72) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

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06156111 EMBASE No: 1995197297

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Dept. of Electrical/Electronic Engg., Yamaguchi University, Yamaguchi Japan

Japanese Journal of Medical Electronics and Biological Engineering ( JPN. J. MED. ELECTRON. BIOL. ENG. ) ( Japan ) 1994 , 32/4 (246-253)

**CODEN:** IYSEA **ISSN:** 0021-3292

**Document Type:** Journal ; Article

**Language:** JAPANESE **Summary Language:** ENGLISH; JAPANESE

**MEDICAL DESCRIPTORS:**

article; bath; computer assisted diagnosis; electric conductivity; electrocardiogram; heart rate; information processing; r wave; waveform

23/3,K/6 (Item 6 from file: 72) [Links](#)

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05991163 EMBASE No: 1995019779

**Analysis of PTCA-induced ischemia using an ECG inverse solution or the wavelet transform**

MacLeod R.S.; Brooks D.H.; On H.; Krim H.; Lux R.L.; Kornreich F.

Nora Eccles Harrison CVRTI, University of Utah, Building 500, Salt Lake City, UT 84112 United States

Journal of Electrocardiology ( J. ELECTROCARDIOL. ) ( United States ) 1994 , 27/SUPPL. (93-99)

**CODEN:** JECAB **ISSN:** 0022-0736

**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**MEDICAL DESCRIPTORS:**

analytic method; article; body surface; computer model; electrocardiography; electrode; heart electrophysiology; human; priority journal; trunk; waveform

23/3,K/7 (Item 7 from file: 72) [Links](#)

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05913208 EMBASE No: 1994319077

**Entrainment of reentrant tachycardia in a computer model**

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Journal of Electrocardiology ( J. ELECTROCARDIOL. ) ( United States ) 1994 , 27/4 (277-286)

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**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**MEDICAL DESCRIPTORS:**

article; computer model; computer simulation; heart cycle; heart excitation; heart pacing; heart rate; priority journal; qrs complex; waveform

23/3,K/8 (Item 8 from file: 72) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

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05780791 **EMBASE No:** 1994194441

**Nonuniform muscle fiber orientation causes spiral wave drift in a finite element model of cardiac action potential propagation**

Rogers J.M.; McCulloch A.D.

San Diego Supercomputer Center, P.O. Box 85608, San Diego, CA 92186-9784 United States

Journal of Cardiovascular Electrophysiology ( J. CARDIOVASC. ELECTROPHYSIOL. ) ( United States ) 1994 , 5/6 (496-509)

**CODEN:** JCELE **ISSN:** 1045-3873

**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**MEDICAL DESCRIPTORS:**

anisotropy; article; computer model; heart electrophysiology; priority journal; waveform

23/3,K/9 (Item 9 from file: 72) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#)

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05734623 **EMBASE No:** 1994131254

**The development of implantable cardioversion defibrillation systems: The clinical chronicle of defibrillation leads**

Timmis G.C.; Oak R.

Director of Research, Division of Cardiology, William Beaumont Hospital, 3601 W. Thirteen Mile Rd, Royal Oak, MI 48073 United States

American Heart Journal ( AM. HEART J. ) ( United States ) 1994 , 127/4 II SUPPL. (1003-1009)

**CODEN:** AHJOA **ISSN:** 0002-8703

**Document Type:** Journal ; Conference Paper

**Language:** ENGLISH **Summary Language:** ENGLISH

**MEDICAL DESCRIPTORS:**

\* bradycardia--prevention--pc; \*bradycardia--therapy--th; \* cardioversion; \*defibrillator; \*electrode; \*heart ventricle arrhythmia; \*waveform

23/3,K/10 (Item 10 from file: 72) [Links](#)

Fulltext available through: [Institute of Electrical and Electronics Engineers](#) [USPTO Full Text Retrieval Options](#)

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05720694 EMBASE No: 1994137700

**Refractory period prolongation by biphasic defibrillator waveforms is associated with enhanced sodium current in a computer model of the ventricular action potential**

Jones J.L.; Jones R.E.; Milne K.B.

Dept. of Physiology and Biophysics, Georgetown University, Washington, DC United States

IEEE Transactions on Biomedical Engineering ( IEEE TRANS. BIOMED. ENG. ) ( United States ) 1994 , 41/1 (60-68)

CODEN: IEBEA ISSN: 0018-9294

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

MEDICAL DESCRIPTORS:

article; computer model; heart electrophysiology; heart ventricle; hyperpolarization; waveform

23/3,K/11 (Item 11 from file: 72) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

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05473772 EMBASE No: 1993241871

**Potential distributions generated by point stimulation in a myocardial volume: Simulation studies in a model of anisotropic ventricular muscle**

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CODEN: JCELE ISSN: 1045-3873

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

MEDICAL DESCRIPTORS:

anisotropy; article; computer simulation; electrostimulation; endocardium; epicardium mapping; heart excitation; heart muscle potential; heart pacing; purkinje fiber; waveform

23/3,K/12 (Item 1 from file: 73) [Links](#)

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07400091 EMBASE No: 1998311521

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**Author Email:** undar@uthscsa.edu

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**CODEN:** PERFE **ISSN:** 0267-6591

**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**Number Of References:** 41

**MEDICAL DESCRIPTORS:**

neurological complication--prevention--pc; heart ventricle ejection time; waveform; human; article; priority journal

23/3,K/13 (Item 2 from file: 73) [Links](#)

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07267163 **EMBASE No:** 1998150260

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**CODEN:** JMTEDE **ISSN:** 0309-1902

**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**Number Of References:** 13

**MEDICAL DESCRIPTORS:**

st segment; t wave; waveform; clinical protocol; data base; heart rate; oscillation; signal noise ratio; analytic method; human; article

23/3,K/14 (Item 3 from file: 73) [Links](#)

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06856490 **EMBASE No:** 1997139125

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Hecher K.; Hackeloer B.-J.

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**CODEN:** UOGYF **ISSN:** 0960-7692

**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**Number Of References:** 26

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23/3,K/15 (Item 4 from file: 73) [Links](#)

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06202304 **EMBASE No:** 1995239589

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23/3,K/16 (Item 5 from file: 73) [Links](#)

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**Language:** JAPANESE **Summary Language:** ENGLISH; JAPANESE

**MEDICAL DESCRIPTORS:**

article; bath; computer assisted diagnosis; electric conductivity; electrocardiogram; heart rate; information processing; r wave; waveform

23/3,K/17 (Item 6 from file: 73) [Links](#)

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Journal of Electrocardiology (J. ELECTROCARDIOL.) (United States) 1994, 27/SUPPL. (93-99)

CODEN: JECAB ISSN: 0022-0736

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

**MEDICAL DESCRIPTORS:**

analytic method; article; body surface; computer model; electrocardiography; electrode; heart electrophysiology; human; priority journal; trunk; waveform

23/3,K/18 (Item 7 from file: 73) [Links](#)

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23/3,K/19 (Item 8 from file: 73) [Links](#)

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**Document Type:** Journal ; Article  
**Language:** ENGLISH **Summary Language:** ENGLISH  
**MEDICAL DESCRIPTORS:**  
anisotropy; article; computer model; heart electrophysiology; priority journal; waveform

23/3,K/20 (Item 9 from file: 73) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#)  
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American Heart Journal ( AM. HEART J. ) ( United States ) 1994 , 127/4 II SUPPL. (1003-1009)  
**CODEN:** AHJOA **ISSN:** 0002-8703  
**Document Type:** Journal ; Conference Paper  
**Language:** ENGLISH **Summary Language:** ENGLISH  
**MEDICAL DESCRIPTORS:**  
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23/3,K/21 (Item 10 from file: 73) [Links](#)

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05720694 EMBASE No: 1994137700

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**CODEN:** IEBEA **ISSN:** 0018-9294  
**Document Type:** Journal ; Article  
**Language:** ENGLISH **Summary Language:** ENGLISH  
**MEDICAL DESCRIPTORS:**  
article; computer model; heart electrophysiology; heart ventricle; hyperpolarization; waveform

23/3,K/22 (Item 11 from file: 73) [Links](#)

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05473772 EMBASE No: 1993241871

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Language: ENGLISH Summary Language: ENGLISH

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23/3,K/23 (Item 12 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

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04946398 EMBASE No: 1992086614

**A comprehensive cardiovascular waveform analysis program for IBM(R)- compatible personal computers**

Stewart S.F.C.; Liang I.Y.S.; Flack J.E.; Clark R.E.

Hydrodynamics and Acoustics Branch, Center for Devices and Radiological Health, Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857 United States

Biomedical Instrumentation and Technology ( BIOMED. INSTRUM. TECHNOL. ) ( United States ) 1992 , 26/1 (39-47)

CODEN: BITYE ISSN: 0899-8205

Document Type: Journal ; Conference Paper

Language: ENGLISH Summary Language: ENGLISH

**A comprehensive cardiovascular waveform analysis program for IBM(R)- compatible personal computers**

**Computerized cardiovascular waveform processing has become a necessary and fundamental tool in the analysis of physiologic data. The...**

23/3,K/24 (Item 13 from file: 73) [Links](#)

Fulltext available through: [custom link](#) [USPTO Full Text Retrieval Options](#)

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04901155 EMBASE No: 1992041370

**Defibrillation efficacy using two low-profile endocardial electrodes**

Singer I.; Maldonado C.; Vance F.; Simpson P.; Kupersmith J.

University of Louisville, School of Medicine, 550 S. Jackson St., Louisville, KY 40292 United States

American Journal of the Medical Sciences ( AM. J. MED. SCI. ) ( United States ) 1991 , 302/2 (82-88)

**CODEN:** AJMSA **ISSN:** 0002-9629

**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**MEDICAL DESCRIPTORS:**

animal experiment; article; computer program; dog; dose response; electric current; electric potential; heart pacing; heart ventricle fibrillation; instrumentation; nonhuman; priority journal; waveform

23/3,K/25 (Item 14 from file: 73) [Links](#)

EMBASE

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02433683 EMBASE No: 1983144694

**Microprocessor control of a ventricular volume servo-pump**

Sunagawa K.; Lim K.O.; Burkhoff D.; Sagawa K.

Dep. Biomed. Eng., Johns Hopkins Univ. Sch. Med., Baltimore, MD 21205 United States

Annals of Biomedical Engineering ( ANN. BIOMED. ENG. ) ( United Kingdom ) 1982 , 10/4 (145-159)

**CODEN:** ABMEC

**Document Type:** Journal

**Language:** ENGLISH

**MEDICAL DESCRIPTORS:**

isolated heart; pressure volume curve; waveform; theoretical study; computer analysis; nonhuman; heart

23/3,K/26 (Item 15 from file: 73) [Links](#)

EMBASE

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00907745 EMBASE No: 1978035902

**Analysis of the thoracic electrical impedance waveform for estimation of cardiac output**

Mapleson W.W.; Chilcoat R.T.; Blewett M.C.; Lunn J.N.

Dept. Anaesth., Welsh Nat. Sch. Med., Cardiff United Kingdom

British Journal of Anaesthesia ( BR. J. ANAESTH. ) 1977 , 49/2 (184)

**CODEN:** BJANA

**Document Type:** Journal

**Language:** ENGLISH

...impedance waveforms, which had been stored on magnetic tape, were digitized. Seven features of the waveform for each heart beat were measured with a Nova 2 mini computer, and averaged over about 20 successive heart beats. This gave mean values for each feature...

23/3,K/27 (Item 1 from file: 149) [Links](#)

TGG Health& Wellness DB(SM)

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01232659 **Supplier Number:** 08251956 (USE FORMAT 7 OR 9 FOR FULL TEXT )

**Advanced Technology Laboratories Inc. and SpaceLabs Inc. introduce new products at American College of Cardiology meeting. (product announcement)**

PR Newswire , 0319SE002

March 19 ,  
1990

**Document Type:** product announcement **Publication Format:** Newswire

**Language:** English

**Record Type:** Fulltext **Target Audience:** Trade

**Word Count:** 526 **Line Count:** 00053

...new products: MultiView (TM) Arrhythmia monitoring, the PCMS Digital Telemetry System for "cordless" monitoring of heart waveforms in hospital intermediate care units, and the PC Express (TM) monitor, the industry's first truly modular portable monitor. All product introductions are...

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[File 72] EMBASE 1993-2007/Apr 05

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[File 73] EMBASE 1974-2007/Apr 05

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[File 149] TGG Health& Wellness DB(SM) 1976-2007/Mar W3

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Set	Items	Description
S1	100715	ACOUSTICAL OR AUDIO OR SOUND FROM 72, 73, 149
S2	1238404	SHAPE OR CHARACTERISTICS OR SLOPE OR PATTERN FROM 72, 73, 149
S3	30102	WAVEFORM? FROM 72, 73, 149
S4	1666451	HEARTBEAT? OR HEART()BEAT? OR CARDIOVASCULAR? FROM 72, 73, 149
S5	3511	CARDIO()GRAPH? OR CARDIOGRAPH? FROM 72, 73, 149
S6	191507	DATABANK? ? OR DATABASE? ? OR DATA()BANK? ? OR BASE? ?) FROM 72, 73, 149
S7	4920224	PATIENT? ? FROM 72, 73, 149

S8 920992 MONITOR? OR SENSOR? FROM 72, 73, 149  
S9 346900 SUBMIT? OR TRANSMIT? OR INPUT? FROM 72, 73, 149  
S10 892 (NOTIFY? OR NOTIFICATION? OR MESSAGE? OR EMAIL) (3N) (DOCTOR OR PHYSICIAN)  
FROM 72, 73, 149  
S11 1686 S3(6N) (S4 OR HEART) FROM 72, 73, 149  
S12 1444970 PC OR COMPUTER? OR LAPTOP? OR LAP()TOP? ? OR PDA OR BLACKBERRY OR  
DIGITAL()ASSISTANT? FROM 72, 73, 149  
S13 0 S11(10N)S6(5N)S12 FROM 72, 73, 149  
S14 106 S11(10N) (S6 OR S12) FROM 72, 73, 149  
S15 1580 S11 NOT S14 FROM 72, 73, 149  
S16 1171 S15/1999:2007 FROM 72, 73, 149  
S17 409 S15 NOT S16 FROM 72, 73, 149  
S18 0 S S14(10N)S10  
S19 0 S S14(10N)S2  
S20 79 S S14/1999:2007  
S21 409 S S17 NOT S20  
S22 79 S S14/1999:2007  
S23 27 S S14 NOT S22

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\*File 583: This file is no longer updating as of 12-13-2002.

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[File 2] INSPEC 1898-2007/Mar W4  
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[File 475] Wall Street Journal Abs 1973-2007/Apr 04  
(c) 2007 The New York Times. All rights reserved.

[File 99] Wilson Appl. Sci & Tech Abs 1983-2007/Mar  
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Set       Items      Description  
S1       348064     ACOUSTICAL OR AUDIO OR SOUND FROM 35, 583, 65, 2, 144, 474, 475, 99  
S2       2304244     SHAPE OR CHARACTERISTICS OR SLOPE OR PATTERN FROM 35, 583, 65, 2, 144,  
474, 475, 99  
S3       89042      WAVEFORM? FROM 35, 583, 65, 2, 144, 474, 475, 99  
S4       547645      HEARTBEAT? OR HEART()BEAT? OR CARDIOVASCULAR? FROM 35, 583, 65, 2, 144,  
474, 475, 99  
S5       1741        CARDIO()GRAPH? OR CARDIOGRAPH? FROM 35, 583, 65, 2, 144, 474, 475, 99  
S6       381114      DATABANK? ? OR DATABASE? ? OR DATA()BANK? ? OR BASE? ?) FROM 35, 583, 65,  
2, 144, 474, 475, 99  
S7       1355564     PATIENT? ? FROM 35, 583, 65, 2, 144, 474, 475, 99  
S8       1107834     MONITOR? OR SENSOR? FROM 35, 583, 65, 2, 144, 474, 475, 99  
S9       842400      SUBMIT? OR TRANSMIT? OR INPUT? FROM 35, 583, 65, 2, 144, 474, 475, 99  
S10      100         (NOTIFY? OR NOTIFICATION? OR MESSAGE? OR EMAIL) (3N) (DOCTOR OR PHYSICIAN)  
FROM 35, 583, 65, 2, 144, 474, 475, 99  
S11      364         S3(6N) (S4 OR HEART) FROM 35, 583, 65, 2, 144, 474, 475, 99  
S12      2302488     PC OR COMPUTER? OR LAPTOP? OR LAP()TOP? ? OR PDA OR BLACKBERRY OR  
DIGITAL()ASSISTANT? FROM 35, 583, 65, 2, 144, 474, 475, 99  
S13      1         S11(10N) S6(5N) S12 FROM 35, 583, 65, 2, 144, 474, 475, 99  
S14      16         S11(10N) (S6 OR S12) FROM 35, 583, 65, 2, 144, 474, 475, 99  
S15      348         S11 NOT S14 FROM 35, 583, 65, 2, 144, 474, 475, 99  
S16      155         S15/1999:2007 FROM 35, 583, 65, 2, 144, 474, 475, 99  
S17      193         S15 NOT S16 FROM 35, 583, 65, 2, 144, 474, 475, 99  
S18      3         S S14/1999:2007  
S19      155         S S16 NOT S18

13/7/1 (Item 1 from file: 144) [Links](#)

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12930505 PASCAL No.: 97-0202350

Applying incompletely connected feedforward neural network to ambulatory ECG data compression

ZHAO Y; WANG B; ZHAO W; DONG L  
Hangzhou Univ, Hangzhou, China  
Journal: Electronics Letters, 1997  
, 33 (3) 220-221

ISSN: 0013-5194 CODEN: ELLEAK Availability: INIST-12270

No. of Refs.: 3 Refs.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: United Kingdom

Language: English

An incompletely connected feedforward neural network with three section corresponding to the compression of the three parts of ECG, i.e. the P wav part, the QRS complex part and the T wave part, is applied to ECG dat compression. Without increasing the computational burden, improve compression results when there is much variation in the ECG waveforms.

/7/1 (Item 1 from file: 2) [Links](#)

INSPEC

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07112212 INSPEC Abstract Number: C9901-7330-398

Title: Nonlinear modelling of the ventricular activation function from the arterial pressure waveform

Author Guarini, M.; Urzua, J.; Cipriano, A.; Gonzalez, W.

Author Affiliation: Dept. de Ingenieria Electr., Pontificia Univ. Catolica de Chile, Santiago, Chile

Conference Title: Simulation in the Medical Sciences Conference. Proceedings of the 1997 Western MultiConference p. 163-7

Editor(s): Anderson, J.G.; Katzper, M.

Publisher: SCS , San Diego, CA, USA

Publication Date: 1997 Country of Publication: USA x+199 pp.

ISBN: 1 56555 105 2 Material Identity Number: XX98-02439

Conference Title: Proceedings of Simulation in the Medical Sciences

Conference Sponsor: SCS

Conference Date: 12-15 Jan. 1997 Conference Location: Phoenix, AZ, USA

**Language:** English **Document Type:** Conference Paper (PA)

**Treatment:** Practical (P); Theoretical (T)

**Abstract:** In this work we present a nonlinear model of the left ventricle that realistically mimics the blood pumping towards the arterial load. A procedure that uses powerful nonlinear optimization algorithms is also presented, and was developed in order to estimate the parameters of the ventricular model, provided the user supplies the proximal arterial pressure waveform, as well as the corresponding blood flow waveform through the proximal aorta. The model and the estimation procedure were tested using computer generated waveforms, obtained through simulation of a cardiovascular model, and also using data obtained from laboratory dogs. Results show that the model is accurate and can be used to predict cardiac function in critical patients. However, this is only possible through more sophisticated estimation techniques, that must generate the required pressure and flow waveforms in a previous stage. ( 6 Refs)

**Subfile:** C

Copyright 1998, IEE

20/7/2 (Item 2 from file: 2) [Links](#)

INSPEC

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06093482 **INSPEC Abstract Number:** A9523-8760G-009, B9512-7510B-093

**Title:** Respiratory rhythm detection with photoplethysmographic methods

**Author** Barschdorff, D.; Wei Zhang

**Author Affiliation:** Paderborn Univ., Germany

**Conference Title:** Proceedings of the 16th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Engineering Advances: New Opportunities for Biomedical Engineers (Cat. No.94CH3474-4)

**Part** vol.2 p. 912-13 vol.2

**Editor(s):** Sheppard, N.F., Jr.; Eden, M.; Kantor, G.

**Publisher:** IEEE , New York, NY, USA

**Publication Date:** 1994 **Country of Publication:** USA 2 vol. (xxxii+xxiv+1421) pp.

**ISBN:** 0 7803 2050 6

**U.S. Copyright Clearance Center Code:** 0 7803 2050 6/94/\$4.00

**Conference Title:** Proceedings of 16th Annual International Conference of the IEEE Engineering in Medicine and Biology Society

**Conference Date:** 3-6 Nov. 1994 **Conference Location:** Baltimore, MD, USA

**Language:** English **Document Type:** Conference Paper (PA)

**Treatment:** Practical (P)

**Abstract:** A transmittance type infrared photoelectric plethysmograph (PPG) is described that performs time and frequency analysis of the peripheral finger volume pulse using an IBM 386 computer. It was revealed that in addition to the heart action the respiratory rhythm and waveform could be obtained from the peripheral volume pulse signal. This result was confirmed with the aid of a true respiration signal from a thermistor in different experiments: (1) varying breathing rates; (2) breathing-stop. The authors conclude that their new method may be useful for clinical noninvasive breath monitoring. ( 4 Refs)

**Subfile:** A B

Copyright 1995, IEE

20/7/3 (Item 3 from file: 2) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

INSPEC

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05192219 INSPEC Abstract Number: C9208-7330-129

Title: A comprehensive cardiovascular waveform analysis program for IBM compatible personal computers

Author Stewart, S.F.C.; Liang, I.Y.S.; Flack, J.E.; Clark, R.E.

Author Affiliation: Nat. Heart, Lung and Blood Inst., Nat. Inst. of Health, Bethesda, MD, USA

Journal: Biomedical Instrumentation & Technology vol.26, no.1 p. 39-47

Publication Date: Jan.-Feb. 1992 Country of Publication: USA

CODEN: BITYE2 ISSN: 0899-8205

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P); Experimental (X)

Abstract: Computerized cardiovascular waveform processing has become a necessary and fundamental tool in the analysis of physiologic data. The availability of numerous commercial data-analysis programs has significantly enhanced the efficiency of waveform analysis. However, creating or modifying a program for each new experimental protocol can be time-consuming, especially in the error-detection and verification stages.

Single-purpose programs also prove somewhat inflexible to unexpected changes in experimental formats. These problems suggested the need for a more flexible program, but one that is nevertheless specifically suited to the analysis of cardiovascular signals. This need led to the development of a program designed in collaboration with surgeons and physiologists. This program addresses some important analysis problems in cardiovascular research, and allows the user to survey and manipulate cardiovascular waveforms in an intuitive and spontaneous manner. (7 Refs)

Subfile: C

20/7/4 (Item 4 from file: 2) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

INSPEC

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03582551 INSPEC Abstract Number: A86012234, C86010945

Title: Computer-aided analysis of in-flight physiological measurement

Author Armstrong, G.C.

Author Affiliation: Comput. Sci. Corp., US Air Force Flight Test Center, Edwards Air Force Base, CA, USA

Journal: Behavior Research Methods, Instruments, & Computers vol.17, no.2 p. 183-5

Publication Date: April 1985 Country of Publication: USA

CODEN: BRMCEW ISSN: 0743-3808

Conference Title: 14th Annual Conference of the Society for Computers in Psychology

Conference Date: 7 Nov. 1984 Conference Location: San Antonio, TX, USA

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Experimental (X)

Abstract: Heart waveforms were collected from pilots under laboratory baseline conditions and in flight. The computer-aided method for smoothing the heart waveforms recorded in flight is described. (2 Refs)

**Subfile: A C**

20/7/5 (Item 1 from file: 144) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

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13668469 PASCAL No.: 98-0376505

Estimation of ventricular volume and elastance from the arterial pressure waveform

URZUA J; SALINAS C; CIPRIANO A; GUARINI M; LEMA G; CANESSA R

Departments of Anesthesiology and Electrical Engineering, and Medical Research Center, Catholic University of Chile, Santiago De Chile, Chile

Journal: Journal of clinical monitoring,

1998, 14 (3)

177-181

ISSN: 0748-1977 CODEN: JCMEOH Availability: INIST-20943

; 354000072434970050

No. of Refs.: 8 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: United States

Language: English

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20/7/6 (Item 2 from file: 144) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

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13585486 PASCAL No.: 98-0289193

Obstetric outcome in women who present with a reduction in fetal movements in the third trimester of pregnancy

HARRINGTON K; THOMPSON O; JORDAN L; PAGE J; CARPENTER R G;  
CAMPBELL S

Academic Department of Obstetrics and Gynaecology, The Homerton and St Bartholomew's Hospitals, London, United Kingdom; King's College Hospital, London, United Kingdom; Department of Medical Statistics, London School of Hygiene and Tropical Medicine, London, United Kingdom; St. George's Hospital and Medical School, London, United Kingdom

Journal: Journal of perinatal medicine,  
1998, 26 (2)  
77-82

ISSN: 0300-5577      CODEN: JPEMAO      Availability: INIST-15905  
; 354000075606010010

No. of Refs.: 23 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: Germany

Language: English

A complaint of decreased fetal movements is a common indication for the assessment of fetal well being. The aim of this study was to review the outcome of a group of women whose primary indication for referral was decreased fetal movements. Over a 20 month period, 435 patients were seen in the fetal assessment unit of an inner London teaching hospital, following a primary complaint of reduced fetal movements. Investigations included: the fetal abdominal circumference (AC), amniotic fluid volume (AFV), the umbilical artery pulsatility index (UAPI) derived from Doppler ultrasound waveforms and a computerised analysis of fetal heart rate (FHR) recordings or cardiotocograph (CTG). Outcome measures were: gestational age at delivery, Apgar score < 7 at 5 minutes, admission to the Special Care Baby Unit (SCBU), the need for delivery by an emergency cesarean section for fetal compromise (CSFC), and any perinatal deaths. A comparison of actual versus expected outcome for women with decreased fetal movement revealed the following relative risks, with the 95 % confidence intervals (CI) in brackets; low 5 minute Apgar score 0.03 vs. 0.05 expected (CI = 0.01, 0.05), SCBU admission, 0.06 vs. 0.07 (0.04, 0.08), and preterm delivery, 0.08 vs. 0.11 (0.05, 0.10). Cesarean sections for fetal compromise, 0.07 vs. 0.053 (0.050-0.096). The addition of FHR monitoring to standard ultrasound assessment of well being did not appear to confer any added benefit. There were no fetal deaths. The outcome for pregnancies where the mother presents with decreased fetal movements in the third trimester is comparable with the outcome for the general population.

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20/7/7 (Item 3 from file: 144) Links

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13299172    PASCAL No.: 98-0022401

Noninvasive assessment of cardiac output in critically ill patients by analysis of the finger blood pressure waveform

HIRSCHL M M; BINDER M M; GWECHENBERGER M M; HERKNER H; BUR A;  
KITTLER H; LAGGNER A N

Department of Emergency Medicine, University of Vienna, New General

Hospital, Vienna, Austria; Department of Dermatology, University of Vienna, New General Hospital, Vienna, Austria; Department of Cardiology, University of Vienna, New General Hospital, Vienna, Austria

Journal: Critical care medicine, 1997  
, 25 (11) 1909-1914

ISSN: 0090-3493      CODEN: CCMDC7      Availability: INIST-17751  
; 354000079384840330

No. of Refs.: 29 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: United States

Language: English

Objective: To assess whether the measurement of cardiac output by computer-assisted analysis of the finger blood waveform can substitute for the thermodilution method in critically ill patients. Design: Prospective data collection. Setting: Emergency department in a 2000-bed inner city hospital. Patients: Forty-six critically ill patients requiring invasive monitoring for clinical management were prospectively studied. Interventions : Under local anesthesia a 7-Fr pulmonary artery catheter was inserted via the central subclavian or jugular vein. Cardiac output was determined by the use of a cardiac output computer and injections of 10 mL ice-cold glucose 5%. Noninvasive cardiac output was calculated from the finger blood pressure waveform by the use of the test software program. Measurements and Main Results: Three hundred twenty-three pairs of invasive and noninvasive hemodynamic measurements were collected in intervals of 30 mins from 46 patients (mean age 61.9 + 12.4 yrs; 35 male, 11 female). The average cardiac index during the study period was 2.83 L/min/m SUP 2 (range 0.97 to 5.56). The overall discrepancy between both measurements was 0.14 L/min/ m SUP 2 (95% confidence interval: 0.10-0.18, p < .001). Seventy-five (23.2%) measurements had an absolute discrepancy > + 0.50 L/min/m SUP 2 . Noninvasive and invasive comparisons of mean differential cardiac output were out of phase for 9.7% of all readings. Conclusion: Computer-assisted analysis of finger blood pressure waveform to assess cardiac output is not a substitute for the thermodilution method due to a high percentage (23.2%) of inaccurate readings; however, it may be a useful tool for the detection of relative hemodynamic trends in critically ill patients.

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20/7/8 (Item 4 from file: 144) Links

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12930505    PASCAL No.: 97-0202350

Applying incompletely connected feedforward neural network to ambulatory EC data compression

ZHAO Y; WANG B; ZHAO W; DONG L  
Hangzhou Univ, Hangzhou, China  
Journal: Electronics Letters, 1997  
33 (3) 220-221

ISSN: 0013-5194    CODEN: ELLEAK    Availability: INIST-12270  
No. of Refs.: 3 Refs.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: United Kingdom

Language: English

An incompletely connected feedforward neural network with three section corresponding to the compression of the three parts of ECG, i.e. the P wav part, the QRS complex part and the T wave part, is applied to ECG dat compression. Without increasing the computational burden, improve compression results when there is much variation in the ECG waveforms.

20/7/9 (Item 5 from file: 144) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

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10267860    PASCAL No.: 92-0473772

A comprehensive **cardiovascular waveform** analysis program  
for IBM SUP (R) -compatible personal **computers**

STEWART S F C; LIANG I Y S; FLACK J E; CLARK R E

Food & drug administration, cent. devices radiological health,  
hydrodynamics acoustics branch, Rockville MD 20857, USA

Journal: Biomedical instrumentation & technology

, 1992, 26 (1

) 39-47

ISSN: 0899-8205    Availability: INIST-16429;

354000023355790040

No. of Refs.: 7 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: USA

Language: English

20/7/10 (Item 6 from file: 144) [Links](#)

Fulltext available through: [Institute of Electrical and Electronics Engineers](#) [USPTO Full Text Retrieval Options](#)

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08115090 PASCAL No.: 88-0115403

A prototype inverse solution in one-dimension to find the origin of excitation, strand radius, intracellular resistivity, or distance from the surface

DI PERSIO D A; BARR R C

Duke univ., dep. biomedical eng., Durham NC 27706, USA

Journal: IEEE transactions on biomedical engineering

1987, 34 (9

) 681-691

ISSN: 0018-9294 CODEN: IEBEAX Availability: CNRS-222E5

No. of Refs.: 15 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: USA

Language: ENGLISH

20/7/11 (Item 7 from file: 144) [Links](#)

Fulltext available through: [Institute of Electrical and Electronics Engineers](#) [USPTO Full Text Retrieval Options](#)

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07827074 PASCAL No.: 87-0306797

An efficient algorithm for spectral analysis of heart rate variability

BERGER R D; AKSELROD S; GORDON D; COHEN R J

MIT, div. health sci. technology, Cambridge MA, USA

Journal: IEEE transactions on biomedical engineering

1986, 33 (9

) 900-904

ISSN: 0018-9294 Availability: CNRS-222E5

No. of Refs.: 9 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: USA

Language: ENGLISH

20/7/12 (Item 8 from file: 144) [Links](#)

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07666620 PASCAL No.: 87-0146056

Advances in electrocardiology : proceedings of the 11th international congress on electrocardiology, Caen, July 1984

D'ALCHE Paul, Ed

Universite de Caen. Laboratoire de physiologie animale et bio-informatique, Caen, France

International congress on electrocardiology. 11 (Caen) 1984-07-17  
1985 XX-509 p.

Publisher: Centre de publications de l'Universite de Caen, Caen

ISBN: 2-905461-05-5 Availability: CNRS-Y 23601

Document Type: C (Conference Proceedings) ; M (Monographic)

Country of Publication: France

Language: ENGLISH

Modeles mathematiques. Problemes inverses. Electrophysiologie cellulaire. Magnetocardiographie. Systemes de saisie des donnees. Methodes de traitement. Criteres de normalite. Cartographie des potentiels de surface du corps. Etudes par vectocardiographie. Pathologies du coeur. Monitorage et etudes pharmacologiques et chirurgicales

20/7/13 (Item 1 from file: 99) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#)

Wilson Appl. Sci & Tech Abs

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1249147 H.W. Wilson Record Number: BAST95044900

Monitoring heartbeat

Koyuncu, Baki ;

Electronics World & Wireless World v. 101 (July '95) p. 605-7

Document Type: Feature Article ISSN: 0959-8332

**Abstract:** An inexpensive monitor that can be as efficient as any of the commercial heart rate monitor units is designed. The system comprises 2 probes and their differential amplifier, filters to clear the received probe signals, and a frequency-to-voltage converter to convert the pulse rate frequency to a dc voltage. An LCD unit and its interface IC are used to display the heart pulse rates. The PC interface allows heart rhythm waveforms to be stored and later analyzed. The periodicity and shape of the heart rate rhythms produced with this circuit are the same as those produced on an electrocardiograph.

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